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ITEM 5:* STATE OF THE ENVIRONMENT

EXECUTIVE SUMMARY OF THE COMPREHENSIVE STATE-OF-THE-ENVIRONMENT REPORT**

Note by the Executive Director

Summary

By its decisions 15/13 A, para. 7(c) and 16/15 C, para. 2, the Governing Council called upon the Executive Director to prepare a comprehensive report on the state of the environment 1972-1992. The Governing Council in its decision 16/5, para. 1(c) requested the Executive Director to submit *inter alia*, a brief executive summary of the state-of-the-environment reports, highlighting policy issues involved and the suggested actions by the Council.

The comprehensive report, which runs to over 800 pages, is in four parts. The first examines the major environmental issues of today and how they have evolved over the last two decades. The second reviews the manner in which developments in different sectors of the economy have impacted on the environment, both in developed and developing countries, and examines the interactions between these impacts and the human condition. The third part analyses the range of responses to these developments at the scientific, public, national and international levels. The last part looks into the socio-political, economic and technological developments as they have unfolded and summarizes the challenges and opportunities to be faced now and in the future. The report has tried, to the maximum extent possible, to provide time series for changes and to present its findings mainly in graphics that highlight developments, both good and bad.

The present executive summary follows the outline of the comprehensive report and highlights for each chapter, the main policy issues involved and the suggested actions.

Suggested action by the Governing Council

The Council may wish to take note of the Executive Summary of the comprehensive state-of-the-environment Report: 1972-1992.

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* Refers to the number of the item on the Provisional Agenda (UNEP/GC.17/1).

** Published in English as "The world environment 1972-1992. Two decades of challenge".

I. THE ISSUES

1. Preparation of the State of the Environment 1972-1992 report involved an extensive process of consultations with a large number of leading scientists, scientific organizations, non-governmental organizations, members of the United Nations system, other intergovernmental organizations and Governments. Some 160 individuals and organizations were involved in these consultations.

2. The first ten chapters of the comprehensive report on the state of the environment 1972-1992 detail the range of environmental threats - some well-known two decades ago and some new - and examine how they have unfolded over the past two decades.

1. *Atmospheric pollution*

3. Perception of the problem has broadened tremendously, as evidence accumulates that the assimilative capacity of the global atmosphere is being overburdened. In spite of the expansion in monitoring facilities, reliable data on rural and remote areas are still lacking. The main issues highlighted in 1982 are still with us; but ozone depletion by CFC's and other gases and the emission of gases that cause climate change are now treated as separate issues.

4. Urban pollution is worsening in developing countries, while photochemical pollution, originally an urban problem of local dimensions, has now become a regional or even global problem. Acidification damage continues, in spite of corrective measures, and threatens to spread to developing countries. Airborne toxins are dispersed world-wide and are accumulating in food chains. Background levels of most other pollutants are also increasing, even though lead concentrations have been reduced in developed countries. It is estimated that some 900 million people in urban areas are exposed to unhealthy levels of SO_x and more than one billion to high levels of particulates that could be a health hazard.

5. Most countries are still without the comprehensive energy policies that are the basis of air quality management. There is an urgent need for more work on toxins, background air pollution and assessment of the costs of air pollution damage/control.

2. *Ozone depletion*

6. Discovery of the ozone "hole" in the Antarctic in 1984 made ozone depletion a matter of global concern. Considerable advances in scientific understanding have since been accompanied by intergovernmental action. There is growing evidence that ozone depletion could offset some of the global warming, and that volcanic aerosols are capable of causing ozone depletion for several years.

7. There has been a remarkable series of intergovernmental actions spearheaded by UNEP, for the phasing out of ozone-depleting substances. As more scientific information is collected, more substances are being controlled and their phase-out accelerated. A Multilateral Fund, established in 1990, provides financial help to developing countries in complying with control measures.

8. Even if the control measures were to be fully implemented, ozone losses in the 90's will be comparable to those observed in the 80's and there is a possibility of widespread losses in the Arctic, calling for the possible further limitation of emissions. Partnership between developed and developing countries is essential in monitoring the control of emissions, while the results of further research should form the basis for future action.

3. *Climate change*

9. In 1985, a general consensus emerged that greenhouse warming is a real threat. Research has since continued to clarify the science of the very complex processes involved, to improve the assessment of the impacts of the expected climate changes, and to formulate feasible policy options to cope with the problem. The complexity of the problem is illustrated by recent findings about the cooling effects of ozone layer depletion, sulphur emissions and volcanic eruptions. However, carbon dioxide is considered the main culprit. Estimates of the more serious impacts (sealevel rise, shifts in agricultural patterns) are still being vigorously investigated.

10. On the scientific front there is an obvious need for more observation, analysis, climate change scenarios on the regional scale and estimates of real costs of action/inaction. Climate change also points to the need for serious consideration of the important issues of international equity. The International Convention on Climate Change needs to be strengthened by agreed schedules of freezing emissions, programmes for increasing sinks, concrete forms of cooperation in the dissemination of information and in the transfer of new technologies; and concrete commitments and mechanisms for funding measures to cope with the consequences of climate change, particularly to assist the developing countries.

4. *Availability of fresh water*

11. Fresh water use continues to increase, particularly in the developing countries. As new sources became scarce and expensive to develop, per capita availability is declining. The severity of the water shortage will be further aggravated by a steady deterioration in water quality. Available data show that 10 per cent of all rivers monitored are polluted. Toxic substances are becoming a cause of concern in both developed and developing countries.

12. In 1987, UNEP pioneered the environmentally sound management of shared water resources and two regional agreements were successfully concluded. Review of the results of the International Drinking Water and Sanitation Decade (1981-1990) shows that the achievements - commendable as they are - fall short of the target and that efforts have to continue. Recently, the pricing of water and the cost of recovery have become a major issue in promoting the efficient use of water, bearing in mind the socio political implications, alongside the economic considerations.

13. It is likely that water, like energy in the 1970's, will become the most critical resource issue in most parts of the world by the turn of the century and intensified efforts at the technical, social and political levels will have to be exerted to face this new challenge.

5. *Coastal and marine degradation*

14. The last two decades have revealed that land-based rather than maritime activities are the most significant source of marine pollution. Within the next 20-30 years, the population of coastal zones, where a large proportion of the world population now lives, is expected to almost double. Ecology and land-use patterns in coastal zones continue to be altered. Nearshore regions are degraded by eutrophication and industrial and municipal wastes that are now spreading out to the open seas. These changes are likely to be exacerbated by the impacts of climate change.

15. Inputs of heavy metals and discarded chlorinated hydrocarbons are beginning to decline, PCB's - now banned in some countries - are still increasingly used in tropical regions. Most of the litter that finds its way into the sea consists of resistant plastics and synthetic substances. The inputs of nutrients from sewage and agricultural drainage are expected to exceed natural background inputs several times over within 20-30 years.

Oil pollution continues to be a highly visible form of marine pollution. The sea should no longer be regarded as a bottomless sink, or as an easy option for waste disposal.

16. Scientific knowledge has improved considerably and actions at the regional and international levels have been undertaken. The monitoring initiated under the Regional Seas programmes and other programmes needs to be extended to ensure global coverage and even open ocean monitoring. Fortunately, much of the damage to the marine environment due to human activities is reversible and regional and international agreements can ensure this. However, such agreements can only be effective through the development and enforcement of national legislation.

6. *Land degradation*

17. Although land degradation - whether the desertification of drylands or the soil degradation of more humid areas - is a long-standing problem, it is becoming progressively severe in many parts of the world, and the global store of arable and grazing land continues to decline. At present, desertification - due to a combination of human mismanagement and the inherent fragility of ecological systems - threatens nearly one quarter of the total land area of the world.

18. About 25 per cent of the world's agricultural land is affected by human-induced soil degradation. Although estimates of trends in desertification are possible for specific areas, global statistics on trends are still scanty. Estimates of the degree of soil degradation are still based on expert opinion and cannot be directly translated into concrete production losses or costs of rehabilitation.

19. The two reviews (1984, 1990) of the Plan of Action adopted by the UN Conference on Desertification show that very little progress has been achieved while desertification continues and the cost of combating desertification has risen threefold. In 1991 UNEP formulated new goals for the Plan. The 81 developing countries where 53 per cent of the global cost has to be met need international action in a true partnership.

20. The Global Assessment of Soil Degradation (GLASOD) has provided the first compilation of the types and extent of soil degradation world-wide. A better understanding of the consequences of human transformations of land, as well as of natural perturbations is needed for policy formulation. GLASOD should become an important decision support tool.

7. *Deforestation and habitat loss*

21 Human actions are the predominant cause of change in the world's vegetation cover, severely affecting forests, drylands and wetlands. A recent indicative estimate, covering 87 countries, is that 16.9 million ha of forest have been lost annually during the last decade. There are no reliable world-wide data on the rate of conversion of wetlands and mangroves to other uses, particularly in developing countries; but the rate is undoubtedly, high. The 1982 UNEP review of changes in other habitats remains broadly applicable today.

22. Over the past 20 years, the economic value of the "services" provided by natural and semi-natural vegetation types has become apparent. The ecological principles for their sustainable use are fairly well known; but practice has not kept pace with knowledge. Deforestation has attracted particular attention and many countries have taken steps to improve forest management. The 1971 Ramsar Convention on Wetlands of International Importance Especially as Waterfowl Habitat now has more than 50 Contracting Parties.

23. Efforts to respond to the challenges of deforestation and habitat loss are coming together in new global initiatives to promote international legal instruments on biological diversity and guidelines on forests. National conservation strategies are necessary for the sustainable use of environmental resources and national laws need to regulate land use so as to protect natural habitats.

8. *Loss of biological diversity*

24. The importance of genetic conservation - both on principle and as a matter of self-interest - has gradually become widely appreciated, and the factors that reduce biological diversity are better understood. However, the number of existing species can only be estimated and not all ecosystems are equally diverse biologically. Lately, the two-way links between conservation and biotechnology are also becoming better understood and their sociopolitical implications are being hotly debated, as more and more examples of the economic benefits accruing from the manipulation of genetic resources, particularly in agriculture and medicine, become known.

25. It is now generally conceded that the wisest course is to apply the precautionary principle and avoid unnecessary reduction in biological diversity. As yet, no systematic monitoring system exists to estimate the existing species and their rates of loss. The gaps in knowledge are being filled by UNEP's programme of country studies. States should now move on to ratify and implement the Biodiversity Convention. Issues such as national sovereignty, intellectual property, innovative funding mechanisms and incentives for conservation need to be resolved in the interest of people everywhere. Further effort is also called for in improved economic evaluation of productive and consumptive use values, as well as for more effective approaches for conservation (e.g. protected areas, gene banks).

9. *Environmental hazards*

26. Over the last two decades there has been a threefold increase in major natural disasters, while new technological hazards have resulted in many accidents with serious environmental impacts (oil spills, chemical and nuclear accidents). The impacts of both natural and man-induced environmental hazards are still much more severe in developing countries for a variety of reasons relating to poverty, population pressure and distorted public perceptions.

27. National and regional organizations have responded to long-term environmental risks by setting down rules and regulations to minimize exposure to potential hazards and by organizing effective emergency response plans. Industry, in turn, is moving towards a holistic approach covering risk analysis, safety measures and good response planning. The International Decade for Natural Disaster Reduction, launched in 1990, is also promoting an integrated approach covering improved preparedness, warning and response systems. The experimental phase of the United Nations Centre for Urgent Response to Environmental Emergencies reviews actions needed to respond to man-made environmental emergencies.

28. The historical distinction between natural and man-induced hazards is gradually being replaced by realization of the interdependence of human activities and natural events which determine the frequency and intensity of accidents and disasters. Consideration of environmental hazards now covers slow and cumulative events, biological events, geophysical events and technological hazards. Those issues that have yet to be clarified include potential infringement of national sovereignty and external aid when emergencies extend beyond national borders.

10. *Toxic chemicals and hazardous wastes*

29. Today there are around 100,000 commercially available chemicals, with this number increasing by about 1,000 every year. Answers have been found to some questions relating to the environmental and health risks of a small number of substances, but much remains to be done to meet this challenge. The impacts of these substances in developing countries are generally more severe than in developed countries. National, regional and international efforts continue to improve methods of testing, risk assessment and new approaches to legislation and the international trade in chemicals.

30. However, there are still no internationally agreed methods of testing and reporting on toxicity; no global convention for the exchange of information on chemicals in international trade; and no intergovernmental mechanism for chemical risk assessment and management.

31. Data on the magnitude and trends of non-radioactive hazardous wastes are difficult to assess and are particularly unreliable for developing countries. All methods of disposal of hazardous wastes are unsatisfactory to varying degrees. New technologies offer some promise that is yet to materialize. Thus, the transboundary movement of hazardous wastes, particularly to developing countries, has become a serious political issue.

32. The Basel Convention on Transboundary Movements of Hazardous Wastes and Their Disposal is yet to be widely ratified, and its implementation still has to be monitored effectively. There are still several areas - technological, regulatory and political - that call for action, ranging from minimization to the management of hazardous wastes, particularly in developing countries. The pursuit of cleaner production needs to be intensified so as to reduce waste generation.

II. CAUSES AND CONSEQUENCES

33. The following section analyses the impact of developments in the main sectors of the economy on the environment, both in developed and developing countries. It also discusses the interactions between environmental degradation and the human condition.

11. *Agriculture and fisheries*

34. The environmental impacts of current food, livestock and fisheries production are fairly well understood. Unsustainable practices, inappropriate water management and the widespread use of chemicals are the main causes of environmental degradation. Various alternatives are being developed and applied and several international research institutes are studying ways and means of achieving sustainable increases in food production.

35. The 1985 report on the State of the Environment (environmental aspects of emerging agricultural technologies; population and the environment) warned that unsustainable agricultural practices aggravate the already dire problems of the urban areas and increase dependence on food imports, with consequent political instability. However, sustainable agriculture also involves changes in social attitudes and practices that would combine individual benefits with the rational use of resources for which property rights can still only be established with difficulty. There is also a need to eliminate the distortions in the world market caused by agricultural subsidies in the North and depressed prices of agricultural products of the South.

36. So far, not much is known about the combined impacts of climate change, higher levels of CO_2 and increased ultraviolet radiation on crops, animals, pests and diseases, nor about the impacts of changing atmospheric and oceanic conditions on marine ecosystems.

12. *Industry*

37. As the industrialized countries move into "hi-tech" industries, more "smoke stack" industries move to developing countries, although some such countries have also established modern industries using highly toxic metals and chemicals. The consumption of mineral resources and energy is declining in many industrialized countries as new synthetic materials, more recycling, conservation measures and cleaner technologies are introduced. In many developing countries, the proliferation of small-scale industries, the relatively low priority given to environmental protection and financial constraints have encouraged the use of obsolete, polluting technologies.

38. New, environmentally sound technical solutions need to be coupled with social changes that encourage their implementation through the appropriate mix of regulation and incentives. The developing countries need to pay serious attention to questions of technology choice; the siting, operation and monitoring of industrial plants; and the management of industrial wastes.

39. Past experience indicates the need to monitor the environmental impacts of industry over long periods of time in a "cradle to grave" approach. New technological breakthroughs, in particular, call for alertness and sustained effort to identify their impacts and deal with their adverse effects.

13. *Energy*

40. The interface between the environment and energy production, transformation and transport is complex and constantly evolving. Discussion has shifted from identifying impacts on the physical environment to analysis of the methodological issues of comparing impacts, quantifying costs or evaluating hazards, since no energy technology is entirely free from environmental risk. Restructuring energy mixes, formulating emission standards, developing conventions and introducing technological innovations have produced improvements in developed countries. The issue of global warming has revived interest in non-fossil energy sources. However, the situation in countries relying mainly on biomass sources is being aggravated and more than 2 billion people are expected to face an acute scarcity by the turn of the century.

41. Experience shows that energy production and use and environmental protection can be reconciled, if energy and environmental policy objectives are assessed in the context of one another. Economic and environmental benefits go hand in hand with the more efficient use of energy.

14. *Transport*

42. The real costs of the adverse environmental impacts of the phenomenal expansion in transport services world-wide are enormous and, so far, have been virtually neglected in economic and development planning. Emissions, noise and land use are the main problems. Road transport is the main source of these impacts, which are particularly severe in urban areas, especially in developing countries.

43. Engines and fuels are being improved and new prime movers developed. In certain areas, zero emissions are now specified for the near future. Investments in new transport infrastructure are decreasing in the developed countries, while the overall development of all transport sectors has been sluggish in developing countries.

44. Since transport volumes and their related environmental impacts are certain to increase, it is essential to impose common emission requirements world-wide, based on the best available technologies. Clean, safe and reliable public transport systems should be provided in both developed and

developing regions. Priority should also be given to more environmentally friendly modes of transport (rail and water). Such actions require public support, active participation in their formulation and implementation, as well as closer international cooperation.

15. *Tourism*

45. Tourism has become a sizeable and complex service industry, usually with some environmental quality as the main attraction. The result has been a mixture of positive and negative influences, with the latter being a main cause for concern over the inadequately controlled development of tourism, in spite of the financial benefits. In some cases the best part of the foreign from tourism earnings pays for the import of the goods and services demanded by the tourists.

46. Most tourism has overburdened the "carrying capacity" of the local environment and infrastructure, in many cases causing problems of pollution, depletion of resources and social upheavals. "Eco-tourism" has not always been matched by adequate measures to preserve the pristine natural surroundings that are the main asset.

47. The involvement of all stakeholders in tourism - Governments, business, local communities and the tourists themselves - is essential for achieving the sustainable development of the industry. Managing the environmental threats posed by tourism calls for adequate planning, coordination and collaboration on a regional and even global scale. The development of a standard set of environmental indicators for tourism - preferably on an international basis - could help all stakeholders in assessing the impacts of tourism on a particular environment.

16. *Population and resources*

48. The world population continues to increase at alarming rates, mainly in the developing regions. An immediate challenge for population policy lies in the disequilibrium between the rates of change of populations and the changes in resources, environment and development. It is now realized that there is no simple correlation between population and the environment and that population, environment and development factors interact in different ways in different places. These complex relationships have not yet been addressed in an integrated fashion that also looks into issues such as consumption patterns, population movements and age-sex structures.

49. Population pressure has caused a degradation of resources in four distinct ways: increased rates of resource consumption; massive transfers of resources from relatively poor, overpopulated regions to satisfy the demands of life-styles in richer regions that might even have decreasing populations; increase in the number of poor households world-wide; and exceeding the capacity of social institutions to cope with environmental problems.

50. It follows that significant progress in arresting the degradation of environmental resources can only be achieved through major institutional changes involving the willingness of Governments and bilateral and multilateral development institutions to adopt an integrated approach, addressing both physical and biological aspects in tandem with the human aspects such action must be supported by the systematic application of environmentally benign practices and technologies, the curtailment of overconsumption in the rich North, the fastest possible decline in rates of population growth, the alleviation of poverty and the reversal of poverty-related environmental degradation.

17. *Human settlements*

51. Urbanization has been growing at a much faster rate in developing countries, bringing with it very serious environmental, health and social problems, particularly in the unplanned squatter settlements that are a result of migration from rural areas. Faced with mounting economic problems and the increasing deterioration of the urban environment, rural development plans have been neglected to a large extent, leaving living conditions not much better than in 1970. The developed countries have also faced some serious problems, particularly regarding the homeless in the inner cities, urban pollution and the overburdening of infrastructural services.

52. The sustainable development of human settlements in the developing countries will not be achieved by ad hoc fragmented solutions. An overall national development strategy has to address the urban and rural situations together. The scale of the interlinkages between the two areas poses many challenges for the future. As poverty alleviation emerges as a prerequisite for sustainable development, the human settlements of the poor have to receive priority attention and action.

18. *Health*

53. There have been notable improvements in child mortality rates, life expectancy and the eradication or curing of some diseases world-wide. However, hundreds of millions in the developing countries still suffer from debilitating diseases related to environmental degradation. In developed countries, diseases related to exposure to chemical pollution, eating habits and life-styles are still common. Globally, hundreds of millions continue to be exposed to chemical and physical degradation of the environment, which affects health. The combined effects of air, food and water pollutants are yet to be well documented. Rural health is also affected by problems of land availability and use, malnutrition, the types of fuel used, and the quality of water available. Urban health in slums, for the homeless and for those in unsettled conditions is deteriorating. AIDS has emerged as a serious threat with global dimensions.

54. A "new paradigm for health" considers health as central to development and the quality of human life. At present, national health services, organized mainly for curative services, are not qualified to address health issues with such a holistic approach. There is a need for a further understanding of vulnerability of health to environmental degradation; a mapping of health-environment linkages that meets operational needs and relates vulnerability health to specific development programmes.

19. *Peace and security*

55. Global military expenditure increased in the 1970's at an average annual rate of 2.5 per cent. In the 1980's the annual rate of increase was 3.5 per cent (1.25 times the rate of increase in GDP). Some of the worst features have been environmental modification, the militarization of outer space and increasing political tensions and military conflicts caused by - and causing - environmental degradation. However, of late, there have been some noteworthy disarmament agreements, the actual destruction of some lethal weapons and the institution of inspection procedures.

56. It is estimated that the "peace dividend" of relaxation of international tensions could cover the cost of actions proposed to solve the problem of population, deforestation, loss of biodiversity, energy conservation, soil protection and Third World debt. The concept of security has also evolved into a view that embraces the interlocking elements of environmental security, individual security, societal security, economic security, and military security. It is now abundantly clear that the insecurities that first occur in or around those parts of the world

facing serious environmental problems, particularly in the least developed countries, spread out quickly to threaten whole regions. There are also signs that conflicts over shared water resources could increase in several parts of the world.

III. RESPONSES

20. *Understanding the environment*

57. The last two decades have witnessed considerable advances in each of the main categories of environmental studies: description of the environment; explanation of changes; prediction of changes; and environmental management and policy-formulation. The first two are iterative, since models lead to better modelling. Management strategies aim at reducing predicted environmental impacts. Space platforms, computers, telecommunication networks, and information systems have been behind many of the advances. Notable features have been the improved analytical techniques of complex non-linear systems under conditions of uncertainty, prioritization amidst long-term threats, the proliferation of large-scale international initiatives, and the increased involvement of social scientists in these international programmes. Some of the new disciplines are resource and environmental economics, environmental resource accounting and environmental ethics.

58. The earth is being transformed environmentally, technologically and socially at such rates that many of the environmental perceptions formulated earlier are no longer applicable. The new knowledge is not being applied quickly enough in policy formulation. The challenge now is to formulate and implement environment-economic policies promoting long-term sustainable development. Future scientific endeavour needs to examine indepth and indicate feasible solutions for problems such as growth of population, scarcities of food, water or energy, climate change, loss of biodiversity, hazardous wastes, inequity and poverty.

21. *Perceptions and attitudes*

59. Public concern over the environment has increased remarkably over the last two decades. Better information and a number of natural and man-made environmental disasters have heightened awareness of the relationships between environment and human well-being. However, national environmental priorities vary from location to location and they do not always mean willingness to finance priority actions. The period has witnessed increases in the number of environmental groups and "green" consumer movements. These are provoking changes in the attitudes and approaches of the media, the education system and the business community, reflected in initiatives such as the "Responsible Care" programme of the chemical industry, the "Business Charter" of the International Chamber of Commerce and the emergence of an environmental investment market.

60. The key to a sustainable future lies with well-informed individuals taking an increasingly direct share in the management of their local environment, and the world-wide adoption of an ethic of sustainable living. Environmental education and training, in all forms, at all levels, for citizens in various walks of life and specializations should make people aware of the necessity to stabilize populations and resource consumption and encourage "green" consumption and care for the local environment. Such activities need to be a growth area for the immediate future.

22. *National responses*

61. Environmental policy at the national level has become increasingly cross-sectoral and integrated as well as cognizant of the interdependence of nations, the need for harmonious regional and international actions, and the application of protective approaches to problems (the precautionary

principle) instead of reactive approaches. The industrialized countries have been publishing comprehensive state of the environment reports and some have established independent bodies to evaluate the environment. These countries have also developed an impressive array of regulatory measures and economic incentives for environmental protection. As a broad generalization, the developing world has tended to follow the same pattern, with different time scales and concerns. It is still difficult to include the rural level in overall policies, even though this is often a key element in strategies. Environmental legislation is diverse in range, sophistication and degree of enforcement.

62. Although environmental policy is now the concern of virtually all nations, the programmes, laws and institutions created have grown haphazardly and are still largely sectoral. This situation should now be addressed as a matter of urgency. It has become obvious that business, industry, NGOs and citizen's groups must be involved in the development of environmental policy. The staff, funds and authority of environmental departments in developing countries need to be enhanced particularly in view of the increasing international obligations posed for developing countries. The problem of lack of information and data needs to be addressed effectively.

23. *International responses*

63. The United Nations system has now developed a substantial range of activities related to the environment. All units in the system now address environmental issues within their particular fields of competence, while UNEP plays a catalytic role within the System. The mechanism for playing this role has been changing in an effort to achieve maximum synergy within the system. UNEP has been prominent in drawing attention to emerging environmental issues and ways of responding to them, at both the regional and international levels. The response has varied with circumstances and needs, ranging from an international declaration, action plan, strategy, guidelines, codes of practice or other forms of "soft law" to binding international law. There has also been a massive growth of international institutions outside the United Nations system, sharing its objectives and cooperating with it.

64 There has been an increase in the number of regional political and economic intergovernmental and non-governmental organizations dealing with environment and development questions in one way or the other. At the regional level, policy, law and institutions have commonly evolved together. In a number of regions, action has been carried forward by regular ministerial meetings. It is increasingly recognized that a sectoral approach to environmental management is of limited effectiveness and regional policies have become increasingly integrated, particularly in Europe.

65. Although the complexity and magnitude of the environment/development "problematique" was recognized even before Stockholm, ironically many of the essential points recognized since then are still being raised in debate. Underdevelopment and wasteful consumption and life-styles are back - or, rather, still - on the agenda. The massive proliferation of institutions at the national, regional and international levels has resulted in as much fragmentation as synthesis. What is still lacking is an accepted approach to accounting for the linkages between sectoral activities, macro-economic policies and sustainable development, in policies and strategies.

66. It is clear that UNEP, in cooperation with all concerned, must continue to provide a co-ordinated programme for the whole of the United Nations system, with its Governing Council providing a forum for effective dialogue leading to programmes that respond to individual and collective national needs.

IV. LOOKING AHEAD

67. It is disturbing that the same concluding observations made in *The World Environment 1972-1982* are still valid after a whole decade. There are still serious gaps in our understanding of the environment and our ability to estimate the cost of remedial action. It is still not possible to describe the state of the environment comprehensively or say with confidence that the Governments of the world have the knowledge or the political will to deal with the global problems which we already know exist. We are still without generally accepted socio-economic indicators of a healthy relationship between people and their environment, or of standards for a decent environment, or a comprehensive assessment of the earth's carrying capacity. In the meantime, the world population has been growing at an alarming rate and with widely diverse population densities in ecosystems of widely divergent carrying capacities - imbalances that have been aggravated by harsh climatic conditions. The resulting poverty, further environmental degradation, mass movements of environmental refugees and civil strife are clear for all to see.

68. A review of the intensive debate and study, over two decades, of the interrelationships between environment and development is both useful and sobering. This review reveals, first, the enduring relevance and validity of the ideas and concepts enunciated and, second, that the issues identified remain with us today and our environment and the living conditions in many parts of the world continue to deteriorate. While familiar problems have grown worse, new threats have started to reveal themselves.

69. In the meantime, and particularly since the mid-1980's, the world has been going through major political, economic and social changes that have yet to play themselves out and whose full implications have yet to be revealed. The search for greater economic efficiency has led to the phasing out of "command economies" world-wide and a parallel deregulation of the financial, production and service sectors. The "globalization" process has coincided with rapid and profound technological changes. The emergence of global markets and economic interdependence has largely been fuelled by an extraordinary growth in trade that has been highly selective, by-passing most developing countries that now face a new protectionism and a series of "non-tariff" barriers. A totally deregulated world market could lead to conflicts over international treaties and over national legislation to protect global commons. Similar difficulties could arise with agreements to ensure access of developing countries to environmentally sound technologies. The shifting of economic priorities to export-led growth accompanied by severe structural adjustment programmes in developing countries that have little to export other than natural resources, has coincided with a steady fall in commodity prices, causing economic collapse compounded by mounting external debt. This has meant placing severe pressures on the environment and a further depression of living standards. This is happening at a time when a projected one billion people will share these resources in the South in the near future. The social and environmental changes of the last two decades have indeed been severe.

70. Against these challenges, there is a growing appreciation of the global nature of environmental problems and there are signs of a willingness amongst most Governments to act jointly in developing new and innovative means to address the global environmental problems. There have also been an increasing number of "soft law" instruments and declarations that urgently need mechanisms to monitor their implementation.

71. At the same time, the growing public awareness and concern and the "greening" of business - although in themselves not enough to solve the world's environmental problems - represent a genuine recognition of the seriousness of the situation and are a cause for some optimism.

72. Throughout the present executive summary, examples of achievable future actions have been given at the end of the summary of each chapter. There is no priority between these actions - priority and action are required on all fronts. What is needed now are specific commitments, over specific time-frames, with costs calculated, sources of funding identified and clear indications of who will do what. Nothing less will suffice.